FLUKE®

2014–2015

TEST TOOLS CATALOG

The Most Trusted Tools in the World.

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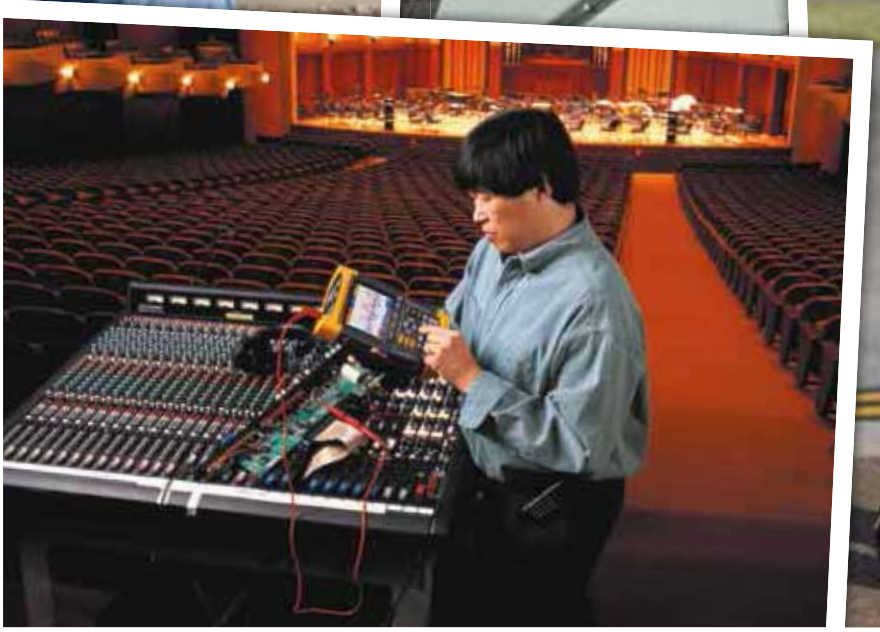

Fluke Corporation is the world leader in the manufacture, distribution and service of electronic test tools and software.

From industrial electronic installation, maintenance and service, to precision measurement and quality control, Fluke tools help keep your business and industry around the globe up and running. Typical customers and users include technicians, engineers, metrologists, medical-device manufacturers, and computer network professionals - people who stake their reputations on their tools. Fluke Tools are well known for portability, ruggedness, safety, ease of use and rigid standards of quality. Therefore professionals choose Fluke.

Find more information about Fluke on our website ...

www.fluke.co.uk

... register yourself for our Newsletter ...

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www.youtube.com/user/FlukeEurope

... and download our App!

Every Fluke tool is built around one idea... You!

FLUKE®

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- Energy
- Online Solution Centers

Academy

- Local hands-on seminars & trainings
- Webinar Programs
- Product Evaluation Center
- Application Notes

Products & Services

- Technical field support
- Customer Support
- Newsletters
- Innovations
- Lifetime Warranty
- Diagnostic Software
- Connectivity/Wireless T&M

New from Fluke

Fluke CNX Wireless System (3000 Series Test Tools)

Take readings quicker and solve problems faster with CNX™ tools. All CNX 3000 Series tools operate independently, but with the push of one button, they can also work together wirelessly as a team to save you time and most important: keep you safe!

Fluke VT02 and VT04 Visual IR Thermometers

Detect issues instantly. Fluke Visual IR Thermometers combine the convenience of a spot thermometer with the visual advantage of an infrared camera creating a brand new tool category.

Fluke 320 Series True-rms Clamp Meters

The Fluke 323, 324 and 325 Clamp Meters are designed to perform in the toughest environments and provide noisefree, reliable results users can trust to confidently diagnose problems.

Ti400, Ti300 and Ti200 Advanced Performance Infrared Cameras

This trio of new Fluke infrared cameras is equipped with LaserSharp™ Auto Focus. Yes, there are other auto focus systems on the market but Fluke took it one step further so you get in-focused images, Every. Single. Time.

Fluke 424D, 419D and 414D Laser Distance Meters

The Fluke laser distance meters use the most advanced distance measuring technology. These meters are fast, accurate, durable, and easy to use— just point and shoot.

Fluke 190-502 ScopeMeter

With the new 500 MHz model, the verification of telecommunication equipment, high frequency and wide bandwidth systems such as radar equipment has become truly portable.

New from Fluke

Fluke 1730 Three-Phase Electrical Energy Logger

Energy logging is now within your reach – discover where you're wasting energy, optimize your facility's energy use and reduce your bill

Fluke 709 / 709H Precision Loop Calibrators

The Fluke 709 and 709H mA loop calibrators are designed to save time and produce high-quality results. This tool reduces the time it takes to measure, or source, current and power up a loop.

Fluke 721 Pressure Calibrator

The Fluke 721 Precision Pressure Calibrator with dual isolated pressure sensors is the ideal tool for gas custody transfer applications (allowing you to take simultaneous static and differential pressure measurements with a single tool.)

Fluke 805 Vibration Meter

The Fluke 805 is not a vibration pen; it's a meter. A Fluke meter that eliminates the confusion of vibration screening and provides reliable measurements you can trust to make critical go or no-go maintenance decisions.

Fluke T90/T110/T130/T150 Voltage and Continuity Testers

Our family of Two-Pole Voltage Testers are built with state-of-the-art measurement and safety technology, these testers offer everything you expect from Fluke, and a little bit more.

Fluke 62 MAX, 62 MAX+ Infrared Thermometers

Takes the heat. And the dust, water and 3-meter drop. The Fluke 62 MAX and 62 MAX+ are the only mini IR thermometers you can handle without care.

New from Fluke

Fluke 985 Particle Counter

The new Fluke 985 Particle Counter is the preferred choice for HVAC and IAQ professionals. From filter testing to IAQ investigations, the Fluke 985 is the portable solution for determining airborne particle concentrations.

Fluke 572-2 Infrared Thermometer

With a straight-forward user interface and soft-key menus, the Fluke 572-2 makes even complex measurements easy. Quickly navigate and adjust emissivity, start data logging, or turn on and off alarms, with just a few pushes of a button.

Fluke 719 Pro Pressure Calibrator

The 719Pro Electric Pressure Calibrator is the ideal test tool for calibrating high accuracy transmitters, pressure switches and pressure gauges.

Fluke CV Series ClirVu® IR Windows

Increase the safety and speed of your electrical thermal imaging inspections with the new Fluke ClirVu® infrared windows. Reduce the risk of arc-flash and electrocution, increase the safety of your personnel and reduce the time and cost of preventive maintenance.

Fluke 6200-2 and 6500-2 PAT Testers

The new Fluke 6200-2 and 6500-2 PAT testers are new low weight, small size, one-touch solutions with redesigned auto-test capabilities to help you increase the number of portable appliance tests completed each day.

Fluke 568Ex Intrinsically Safe Infrared Thermometer

With a rugged, easy-to-use, ergonomic design, the Fluke 568Ex can stand up to tough industrial, electrical, and mechanical environments.

Fluke Combo Kits

Buy a Combo Kit and save

Fluke 87V/E2
Industrial Electrician Combo Kit
- Fluke 87V True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- TP38 Slim Reach Test Probe Set (insulated)
- AC220 SureGrip™ Alligator Clip Set
- TPAK Magnetic Hanger
- 80BK-A Integrated DMM Temperature Probe
- C35 Soft Meter Case

Fluke 87V/i410
Combo Kit for Industrial Applications
- 87V Industrial Multimeter
- TL75 Test Leads
- AC175 Alligator Clips
- i410 400A AC/DC Current Clamp
- 80BK-A Temperature Probe
- C115 Soft Carrying Case

(Not available in all countries)

Fluke 116/62 MAX+,
HVAC Multimeter and IR Thermometer Combo Kit
- Fluke 116 HVAC Multimeter with Temperature and Microamps
- Fluke 62 MAX+
- TL175 Hard Point Test Lead Set
- TPak ToolPak Magnetic Meter Hanging Strap
- Flexible Cuff Pipe clamp Thermocouple
- 80BK Integrated Temperature Probe
- 80AK-A Thermocouple Adapter
- C115 Deluxe soft carrying case with shoulder strap

Fluke 116/323, HVAC True RMS Multimeter and Clamp Meter Combo Kit
- Fluke 116 HVAC Multimeter with Temperature and Microamps
- Fluke 323 Clamp Meter
- TL175 Hard Point Test Lead Set
- TPak ToolPak Magnetic Meter Hanging Strap
- Flexible Cuff Pipe clamp Thermocouple
- 80BK Integrated Temperature Probe
- 80AK-A Thermocouple Adapter
- C115 Deluxe soft carrying case with shoulder strap

Fluke 117/323 Kit
Electrician's Combo Kit
- Fluke 117 True RMS Multimeter
- Fluke 323 Clamp Meter
- Silicon test lead set
- TPAK Magnetic Hanger
- C115 Deluxe carrying case

Fluke 179/TPAK
179/ToolPak Combo Kit
- Fluke 179 True RMS Multimeter
- TPAK ToolPak Meter Hanging Kit

Fluke 179/MAG2 Kit
Industrial Combo Kit
- Fluke 179 True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- AC220 SureGrip™ Alligator Clip Set
- TP74 lantern tip test probe set
- TPAK Magnetic Hanger
- 80BK-A Integrated DMM Temperature Probe
- C35 Soft Meter Case
- + Maglite flashlight

Fluke 179/EDA2 Kit
Electronics Combo Kit
- Fluke 179 True RMS Multimeter
- TL224 SureGrip™ Silicone Test Lead Set
- TL910 Electronic Test Probe Set
- AC280 SureGrip™ Hook Clip Set
- TPAK Magnetic Hanger
- 80BK-A Integrated DMM Temperature Probe
- C35 Soft Meter Case

Ordering Information
Fluke 87V/E2
Fluke 87V/i410
Fluke 116/62 MAX+ kit
Fluke 116/323 Kit
Fluke 117/323 Kit
Fluke 179/TPAK
Fluke 179/MAG2 Kit
Fluke 179/EDA2 Kit

Fluke Combo Kits

Buy a Combo Kit and save

Fluke 289/FVF Industrial Logging Multimeter and Software Combo Kit
- Fluke 289 True-RMS Multimeter
- FVF-SC2 FlukeView Forms Software and cable
- Silicon Test Lead Set
- AC175 Alligator Clips
- 80BK-A Integrated DMM Temperature Probe
- TPAK Magnetic Meter Hanger
- C280 Soft

Fluke 287/FVF FlukeView Forms Combo Kit
- Fluke 287 True RMS Electronic Logging Multimeter with TrendCapture
- FVF-SC2 FlukeView Forms Software and cable
- 80BK-A Thermocouple Probe
- CAT III 1000 V 10 A Modular Test Leads (red, black)
- CAT II 300 V 5 A Alligator Clips (red, black)
- C280 Soft Case for meter protection and accessory storage

Fluke 1587/ET Advanced Electrical Troubleshooting Kit
- Fluke 1587 Insulation Multimeter
- Fluke 62 MAX+ IR Thermometer
- i400 Current Clamp

Fluke 1587/MDT Advanced Motor & Drive Troubleshooting Kit
- Fluke 1587 Insulation Multimeter
- Fluke 9040 Phase Rotation Indicator
- i400 Current Clamp

Fluke T5-H5-1AC Kit
- Fluke T5-1000 Electrical Tester
- H5 Holster
- 1AC-II Volt Alert

Fluke T5-600/62 MAX+/1AC-E Kit
- Fluke T5-600 Electrical Tester
- Fluke 62 MAX+ IR Thermometer
- Fluke 1AC-II Volt Alert
- C115 Soft Meter Case

Fluke 62 MAX+/323 1AC Kit
- Fluke 62 MAX+ IR Thermometer
- Fluke 323 Clamp Meter
- Fluke 1AC-II Volt Alert

Fluke 414D/62 MAX+Kit
- Fluke 414D Laser Distance Meter
- Fluke 62 MAX+ IR Thermometer
- Soft case for each model

Ordering Information
Fluke 287/FVF
Fluke 289/FVF
Fluke 1587/ET
Fluke 1587/MDT
Fluke T5-H5-1AC Kit
Fluke T5-600/62MAX+/IAC-E Kit
Fluke 62 MAX+/323/1AC Kit
Fluke 414D/62 MAX+ Kit

Let Fluke After Sales Service help you further

Did you know that the Fluke after sales service team can offer you much more than just repairing and calibrating your instrument when it is needed? Across our whole Fluke European service organization we have a vast range of capabilities, which can be utilized via your local service centre. Behind the scenes Fluke draws on the expertise of over 150 service staff that are focused on offering only the best and most comprehensive after sales service.

Fluke service centres handle a wide range of equipment.

As part of Fluke's continuing focus on improving our service to our customer we now offer a comprehensive range of repairs and calibrations on a vast range of equipment.
Fluke manufactures equipments such as:

Fluke Brands	Instrument Types
Fluke	Digital Multimeters
Hart Scientific	Electrical Standards
Fluke Networks	Biomedical Equipment
Fluke Biomedical	Data Loggers
Raytek	Thermal Imagers
Reliable Power Meters	Thermometers
Robin	Pressure
LEM Instruments	Function Generators
BEHA	Oscilloscopes
Norma	Installation Testers
Wavetek/Datron	PAT Testers
Metron	Clamp Meters
DHI	Power Analyzers
Comark	EX meters
Amprobe	Plus many more

So why should you use Fluke service?

- Original manufacturers' parts used
- All instruments reviewed for latest updates
- Repair warranty that covers whole unit
- In depth product knowledge
- Accredited calibrations available
- Traceable calibrations available on all products
- Full check of unit during verification cycle
- Full safety test on mains powered units

What other instruments can we help you with?

We also offer a range of calibrations and repairs on other manufacturer's equipment upon request. Manufacturers such as:

- Tektronix
- Agilent
- Bruel & Kjaer
- Philips
- Megger
- Seaward
- Kewtech
- Lecroy
- Hioki
- Yokogawa
- Druck
- Iwatzu
- plus many more ...

What other value added services do we offer?

- Gold Support for Fluke Networks
- Gold CarePlans for calibration products
- A full range of maintenance contracts
- Extended warranty programs
- Instrument upgrades
- Option retrofits
- Asset management
- Calibration reminders

What services do we offer you?

- 5 day repairs on all current products
- 5 days or less on all calibrations (excl. repairs)
- 3 days for all Gold CarePlan calibrations
- 1-2 days on all Networks Gold calibration
- Pick up services where available

On-Line booking in system

Why not use our On-Line booking in system where you can book your unit in, get pricing and receive a RMA number for a smooth return.
www.fluke.com/servicerma

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Fluke: Where safety is built in

As distribution systems and loads become more complex, the possibilities of transient overvoltages increase. Motors, capacitors and power conversion equipment such as variable speed drives can be prime generators of spikes. Lightning strikes on outdoor transmission lines also cause extremely hazardous high-energy transients. If you're taking measurements on electrical systems, these transients are "invisible" and largely unavoidable hazards. They occur regularly on low-voltage power circuits, and can reach peak values in the many thousands of volts. To protect you against transients, safety must be built into the test equipment.

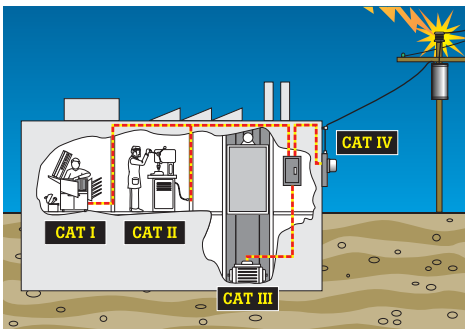


Figure 1. Understanding categories: location

Who Develops Safety Standards?

The IEC (International Electrotechnical Commission) develops international general standards for safety of electrical equipment for measurement, control and laboratory use. IEC61010-1 is used as the basis for the following national standards:

- US ANSI/ISA-S82.01-94
- Canada CAN C22.2 No.1010.1-92
- Europe EN61010-1:2001

Overvoltage Installation Categories

IEC61010-1 specifies categories of overvoltage based on the distance the piece of equipment is from the power source (see Fig. 1 and Table 1) and the natural damping of transient energy that occurs in an electrical distribution system. Higher categories are closer to the power source and require more protection.

Within each installation category there are voltage classifications. It is the combination of installation category and voltage classification which determines the maximum transient withstand capability of the instrument.

IEC 61010 test procedures take into account three main criteria: steady-state voltage, peak impulse transient voltage and source impedance. These three criteria together will tell you a multimeter's true voltage withstand value.

Within a category, a higher working voltage (steadystate voltage) is associated with a higher transient, as would be expected. For example, a CAT III 600 V meter is tested with 6000 V transients while a CAT III 1000 V meter is tested with 8000 V transients.

So far, so good. What is not as obvious is the difference between the 6000 V transient for CAT III 600 V and the 6000 V transient for CAT II 1000 V. They are not the same. This is where the source impedance comes in. Ohm's Law (Amps = Volts/Ohms) tells us that the 2 Ω test source for CAT III has six times the current of the 12 Ω test source for CAT II. The CAT III 600 V meter clearly offers superior transient protection compared to the CAT II 1000 V meter, even though its so-called "voltage rating" could be perceived as being lower. See Table 2.

Independent testing is the key to safety compliance

How can you tell if you're getting a genuine CAT III or CAT II meter? Unfortunately it's not always that easy. It is possible for a manufacturer to self-certify that its meter is CAT II or CAT III without any independent verification. The IEC (International Electrotechnical Commission) develops and proposes standards, but it is not responsible for enforcing the standards. Look for the symbol and listing number of an independent testing lab such as UL, CSA, VDE, TÜV or other recognized approval agency.

These symbols can only be used if the product successfully completed testing to the agency's standard, which is based on national and international standards. UL 3111, for example,

is based on EN61010-1. In an imperfect world, this is the closest you can come to ensuring that the meter you choose was actually tested for safety.

Table 1

Overvoltage category	In brief	Examples
CAT IV	Three-phase at utility connection, any outdoor conductors	• Refers to the "origin of installation"; i.e., where low-voltage connection is made to utility power. • Electricity meters, primary overcurrent protection equipment. • Outside and service entrance, service drop from pole to building, run between meter and panel. • Overhead line to detached building, underground line to well pump.
CAT III	Three-phase distribution, including single-phase commercial lighting	• Equipment in fixed installations, such as switchgear and polyphase motors. • Bus and feeder in industrial plants. • Feeders and short branch circuits, distribution panel devices. • Lighting systems in larger buildings. • Appliance outlets with short connections to service entrance.
CAT II	Single-phase receptable connected loads	• Appliance, portable tools, and other household and similar loads. • Outlet and long branch circuits. • Outlets at more than 10 meters (30 feet) from CAT III source. • Outlets at more than 20 meters (60 feet) from CAT IV source.
CAT I	Electronic	• Protected electronic equipment. • Equipment connected to (source) circuits in which measures are taken to limit transient overvoltages to an appropriately low level. • Any high-voltage, low-energy source derived from a high-winding resistance transformer, such as the high-voltage section of a copier.

Overvoltage installation categories. IEC 61010-1 applies to low-voltage (< 1000V) test equipment

Fluke: Where safety is built in

Safety is everyone's responsibility but ultimately it is in your hands.
No tool by itself can guarantee your safety when working with electricity. It's the combination of the right tools and safe work practices that gives you maximum protection. Here are a few tips to help you in your work:

Make sure you always comply with (local) regulations.

Work on de-energized circuits whenever possible.
Use proper lock-out/tag-out procedures. If these procedures are not in place or enforced, assume that the circuit is live.

Use protective gear when working on live circuits:
- Use insulated tools
- Wear safety glasses or a face shield
- Wear insulated gloves, remove watches or jewelry
- Stand on an insulated mat
- Wear flame resistant clothing, not ordinary work clothes

Use protective equipment such as safety glasses and insulated gloves

Use meters with these markings: 1000 V CAT III or 600 V CAT IV

Select the right test tool:
- Choose a test tool rated to the highest category and voltage for which it could possibly be used (most often 600 or 1000 volt CAT III and/or 600 volt CAT IV).
- Look for the category and voltage marking near the recessed input connectors of your test tool and a "double insulated" symbol on the back.
- Verify your test tool has been tested and certified by two or more independent testing laboratories, such as UL in the United States and VDE or TüV in Europe by looking for the symbols of these agencies on (the back of) your test tool.
- Make sure that the test tool is made of a high-quality, durable non-conductive material.
- Check the manual to verify that the ohms, continuity and capacitance circuits are protected to the same level as the voltage test circuit, to reduce hazards when the test tool is used incorrectly in ohms, continuity or capacitance mode (if applicable).
- Verify that the test tool has internal protection to prevent instrument damage when voltage is incorrectly applied to an amperage measurement function (if applicable).
- Make sure that the amperage and voltage of your test tool's fuses meets specifications. Fuse voltage must be as high or higher than the test tool's voltage rating.
- Be sure to use test leads that have:
  - Shrouded connectors
  - Finger guards and a non-slip surface
  - Category ratings that equal or exceed those of the test tool
  - Double insulation (look for the symbol)
  - A minimum of exposed metal on the probe tips

Inspect and test your test tool:
- Check for a broken case, worn test leads or a faded display.
- Make sure the batteries still deliver sufficient power to get reliable readings. Many test tools have a low battery indicator on the display.
- Check the test leads resistance for internal breaks while moving the leads around (good leads measure 0.1-0.3 Ohm).
- Use the meter's own test capability to ensure that the fuses are in place and working right (see manual for details).

Apply the appropriate working practices when measuring on live circuits:
- Hook on the ground clip first, then make contact with the hot lead. Remove the hot lead first, the ground lead last.
- Use the three-point test method, especially when checking to see if a circuit is dead. First test a known live circuit. Second, test the target circuit. Third, test the live circuit again. This verifies that your test tool worked properly before and after the measurement.
- Hang or rest the test tool if possible. Try to avoid holding it in your hands, to minimize personal exposure to the effects of transients.
- Use the old electrician's trick of keeping one hand in your pocket. This lessens the change of a closed circuit across your chest and through your heart.

Table 2

Overvoltage Installation Category	Working Voltage (DC or AC RMS to ground)	Peak Impulse Transient (20 repetitions)	Test Source (Ω = V/A)
CAT I	600 V	2500 V	30 Ohm source
CAT I	1000 V	4000 V	30 Ohm source
CAT II	600 V	4000 V	12 Ohm source
CAT II	1000 V	6000 V	12 Ohm source
CAT III	600 V	6000 V	2 Ohm source
CAT III	1000 V	8000 V	2 Ohm source
CAT IV	600 V	8000 V	2 Ohm source

Transient test values for overvoltage installation categories. (50 V/150 V/300 V values not included)

Maximize uptime, minimize downtime

FLUKE®

Identify your maintenance costs and save money

Maximizing uptime and minimizing downtime are the main challenges today for most maintenance staffs.

Constant condition monitoring maximizes component life, tracks equipment wear trends and reduces downtime by identifying problems before they occur. From precision analyzers to troubleshooters, loggers and recorders, Fluke tools are all you need to help you cut plant energy costs and minimize downtime and production stops.

Visit our online platform today for a library of information designed to help you get the most from your time and staff. As partners we believe that if you succeed, we will too.

Learn more
www.fluke.co.uk/PreventiveMaintenance

Make your energy waste visible Identify energy waste and save money

Energy is a critical issue for facilities around the world. Undiscovered and uncorrected energy waste represents tremendous savings. Managing energy efficiency in your facility can save money. Conducting an energy inspection can reduce energy costs by up to 25%.

The materials in this resource center were designed to help you measure energy efficiency, design an energy measurement program for your facility and justify the program to management.

Learn more
www.fluke.co.uk/SaveEnergy

FACT
Fluke Academy of Certified Training

Seminars and training program

If you want in-depth information sign up for one of our seminars and learn about managing your processes efficiently and reducing energy costs in your facility.

- Energy measurement principles
- Motors and Drives troubleshooting
- Theory and practice of Process calibration
- Power Quality seminars
- Thermography seminars

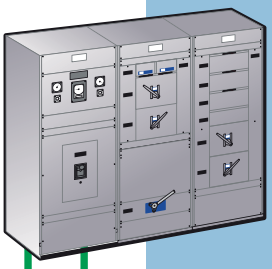
Visit your local Fluke website for more information.

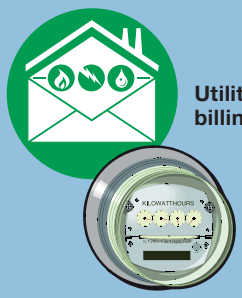
Wasted energy costs you money every year.

FLUKE®

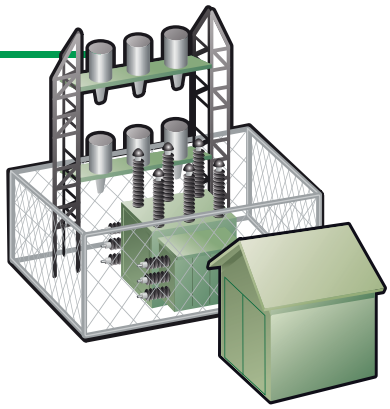
If you don't know how much, it's time to find out.

Electrical subsystem



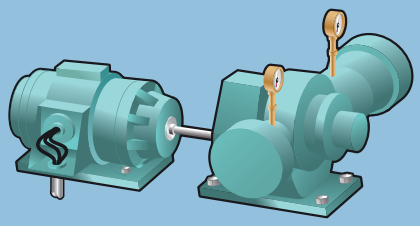


Electrical distribution infrastructure

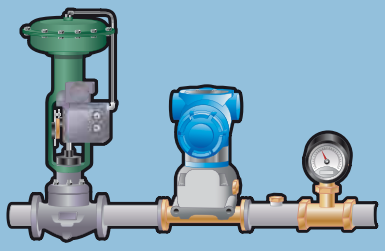


Three-phase electrical distribution (Mains)

Production process systems

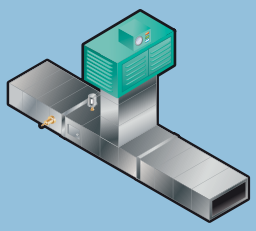


Mechanical loads

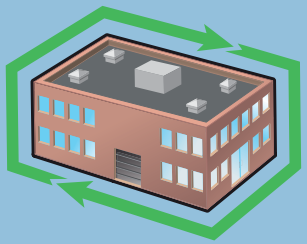


Flow: Air compression, steam

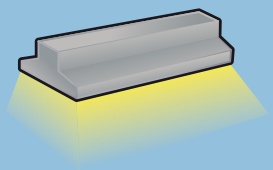
Building infrastructure



Ventilation, heating, cooling



Building envelope



Lighting

Introducing the Fluke Energy Resource Center

Everything you need to know about saving money by identifying and measuring energy waste.

- Case studies
- Success stories
- Interactive illustrations
- Checklists
- Videos and more

Get started today, visit:
www.fluke.co.uk/SaveEnergy

CNX Wireless System

Safer. Faster. Easier

Combine your instrument readings into one. Take readings from multiple instruments remotely - and simultaneously - with Fluke CNX™ wireless measurement tools.

CNX Wireless System (3000 Series Test Tools)

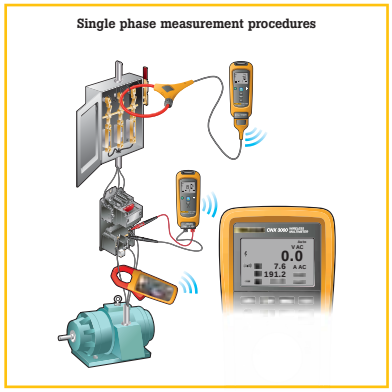
Fluke CNX 3000 Series

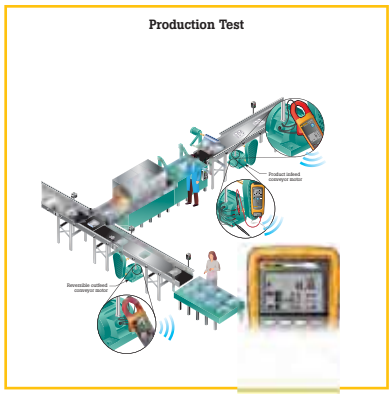
Find It. Fix It. Fast.

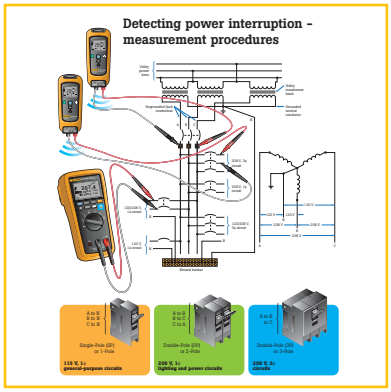
Take readings quicker and solve problems faster with CNX™ tools. All CNX 3000 Series tools operate independently, but with the push of one button, they can also work together wirelessly as a team to save you time and most important: keep you safe!

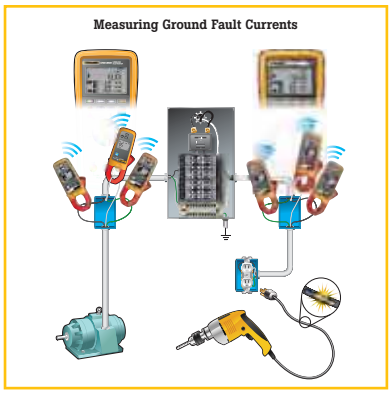
All CNX 3000 Series tools are sold individually and in kits, so you can mix and match to your personal needs.

- Isolate problems quickly by viewing multiple live measurements at once, on the multimeter screen or on your computer.
- Stay safe by separating yourself physically from the test point.
- Save time by waiting less for intermittens or keeping records by logging with the CNX modules.









Possible applications

CNX Wireless System (3000 Series Test Tools)

FLUKE®

Fluke CNX 3000

Fluke CNX Wireless Multimeter

The CNX 3000 Wireless Multimeter has all the essentials for convenient troubleshooting. Plus, the CNX 3000 Multimeter can wirelessly display the measurements from up to three CNX modules at the same time—from up to 20 m (66 ft) away!

- AC and DC voltage measurements to 1000 V
- AC and DC current to 400 mA with 0.01 mA resolution
- Continuity, resistance, diode test, capacitance and frequency measurements
- MIN/MAX recording
- CAT III 1000 V, CAT IV 600 V; IP54

Fluke CNX i3000 Wireless iFlex™ AC Current Module
- True-rms AC flexible current probe
- Measure up to 2500 A
- Log MIN/MAX/AVG readings

Fluke CNX v3000 Wireless AC Voltage Module
- Measure up to 1000 V true-rms AC
- Log MIN/MAX/AVG readings

Fluke CNX a3000 Wireless AC Current Clamp Module
- True-rms AC current clamp
- Measure up to 400 A
- Log MIN/MAX/AVG readings

Fluke CNX t3000 Wireless Temperature Module
- K-type thermocouple thermometer
- Measure up to 1372 °C
- Log MIN/MAX/AVG readings

Fluke CNX pc3000 Wireless PC Adapter
- Communicate real-time readings from CNX tools to your computer
- Download logged data from CNX Wireless Modules to your computer

Included Accessories

CNX3000: TL175 Test Leads, AC175 Alligator Clips
CNX i3000: True-RMS Flexible Current Meter, iFlex i2500-10 Flexible Current Probe, TL175 Test Leads, AC175 Alligator Clips, Magnetic Hanging Strap
CNX t3000: K-Type Thermocouple Thermometer, 80PK-1 K-Type Bead Thermocouple, Magnetic Hanging Strap
CNX v3000: True-RMS AC Voltage Module, TL224 Test Leads, AC285 Alligator Clips, Magnetic Hanging Strap

Ordering Information

Fluke CNX 3000	Wireless Multimeter
Fluke CNX i3000	iFlex AC Wireless Current Module
Fluke CNX t3000	K-Type Wireless Temperature Module
Fluke CNX v3000	AC Wireless Voltage Module
Fluke CNX a3000	AC Wireless Current Clamp Module
Fluke CNX pc3000	PC Adapter and Software

Recommended Accessories

CNX C3000
Premium Modular Tool Bag

CNX C3001
Small Modular Case

CNX C3002
Modular DMM Two-Compartment Soft Case

CNX C3003
Modular DMM Three-Compartment Soft Case

CNX 3000 Wireless Kits
Kits tailored for your specific application

FLUKE®

Fluke CNX 3000 Wireless Kits

CNX 3000 Industrial System

- CNX 3000 Wireless Multimeter
- CNX v3000 AC Wireless Voltage Module
- Three CNX i3000 iFlex AC Wireless Current Modules
- Three iFlex i2500-10 Flexible Current Probes
- CNX pc3000 Wireless PC Adapter and Software
- TL224 Test Leads
- TL175 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips
- Four magnetic hanging straps

CNX 3000 HVAC System

- CNX 3000 Wireless Multimeter
- CNX a3000 AC Wireless Current Clamp Module
- CNX t3000 K-Type Wireless Temperature Module
- CNX pc3000 Wireless PC Adapter and Software
- TL175 Test Leads
- AC175 Alligator Clips
- 80PK-1 K-Type Bead Thermocouple
- Magnetic hanging strap
- Soft carrying case

CNX 3000 General Maintenance System

- CNX 3000 Wireless Multimeter
- CNX v3000 AC Wireless Voltage Module
- CNX i3000 iFlex AC Wireless Current Module
- iFlex i2500-10 Flexible Current Probe
- CNX pc3000 Wireless PC Adapter and Software
- TL224 Test Leads
- TL175 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips
- Two magnetic hanging straps
- Soft carrying case

Additional kits

CNX a3000 AC Current Clamp Kit

- CNX 3000 Wireless Multimeter
- CNX a3000 AC Wireless Current Clamp Module
- TL175 Test Leads
- AC175 Alligator Clips
- Soft carrying case

CNX i3000 iFlex AC Current Kit

- CNX 3000 Wireless Multimeter
- CNX i3000 iFlex AC Wireless Current Module
- iFlex i2500-10 Flexible Current Probe
- TL175 Test Leads
- AC175 Alligator Clips
- Magnetic hanging strap
- Soft carrying case

CNX t3000 Temperature Kit

- CNX 3000 Wireless Multimeter
- CNX t3000 K-Type Wireless Temperature Module
- TL175 Test Leads
- AC175 Alligator Clips
- 80PK-1 K-Type Bead Thermocouple
- Magnetic hanging strap
- Soft carrying case

CNX v3000 AC Voltage Kit

- CNX 3000 Wireless Multimeter
- CNX v3000 AC Wireless Voltage Module
- TL224 Test Leads
- TL175 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips
- Magnetic hanging strap
- Soft carrying case

Included Accessories

Industrial kit: all accessories included with individual items
All other kits: all accessories included with individual items, plus C3003

Ordering Information

Fluke CNX 3000 IND	Industrial System
Fluke CNX 3000 GM	General Maintenance System
Fluke CNX 3000 HVAC	HVAC System
Fluke CNX t3000 Kit	Temperature Measurement Kit
Fluke CNX i3000 Kit	iFlex AC Current Measurement Kit
Fluke CNX a3000 Kit	AC Current Clamp Kit
Fluke CNX v3000 Kit	AC Voltage Kit

Thermal Imagers + CNX Wireless System

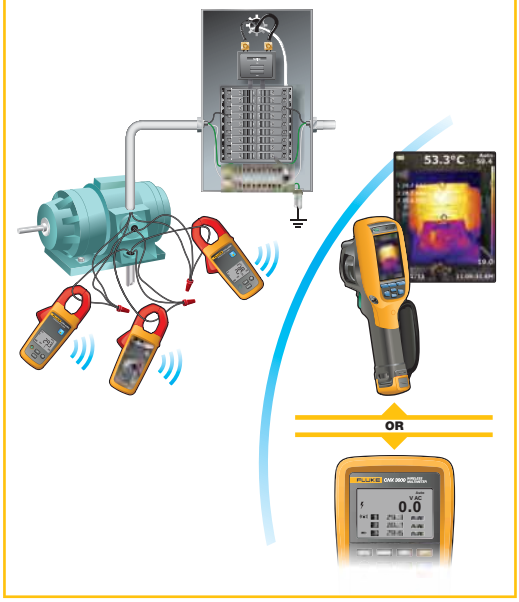
Fluke Thermal Imagers are now part of the CNX Wireless Solution

Easier measuring, even in difficult or dangerous locations
Set up wireless modules in an electrical cabinet, near rotating machines, or in harsh environments on equipment you want to monitor. Then step back and take readings from a safe distance or a more comfortable spot. You'll improve safety by minimizing your exposure to those conditions.

Use modules as stand-alone tools too
The CNX modules not only communicate with your thermal imager, but can also be used as stand-alone test tools. Capture measurements over time and then download to a computer later for reporting, tracking and documentation. It's ideal for preventive maintenance.

Troublesshooting systems

Measuring incoming current



Determining current unbalance

Measuring current load

Note: Use a wireless multimeter or a thermal imager. Both tools can not be used simultaneously to receive wireless measurements.

Digital Multimeters

Safety, quality and performance: three words that sum up the benefits of our extensive range of digital multimeters. Designed to help you do your job faster, more efficiently and with greater accuracy, there is a model for every budget and application. Choose from handheld troubleshooters to ultra smart instruments packed with features, including the ability to log and graph data, as well as high-precision bench units.

DMM Selection guide

	Highest accuracy		Remote display	High-end Industrial		Industrial maintenance and field service			Electrical	HVAC/R	Field Service	Basic Electrical		Heavy duty (IP67)		General Purpose	Auto-motive	Loop calibration		Insulation test		CNX Multimeter
Basic features	**289**	**287**	**233**	**87V**	**83V**	**179**	**177**	**175**	**117**	**116**	**115**	**114**	**113**	**27II**	**28II/28IIEx**	**77IV**	**88V**	**789**	**787**	**1587**	**1577**	**CNX 3000**
Counts	50000	50000	6000	20000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	20000	6000	20000	4000	4000	6000	6000	6000
True RMS readings	AC+DC	AC+DC	AC	AC		AC	AC	AC	AC	AC	AC	AC	AC		AC			AC	AC	AC	AC	AC
Basic DC accuracy	0,03%	0,03%	0,25%	0,05%	0,10%	0,09%	0,09%	0,15%	0,50%	0,50%	0,50%	0,50%	2,00%	0,10%	0,05%	0,30%	0,10%	0,10%	0,10%	0,09%	0,20%	0,09%
Wide bandwidth	100 kHz	100 kHz		20 kHz	5 kHz									20 kHz	50 kHz							
Auto/manual ranging	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●			●/●
Measurements																						
Voltage AC/DC	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	600 V	600 V	600 V	600 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
Current AC/DC	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	200 µA	10 A			10 A	10 A	10 A	10 A	1 A	1 A	400 mA	400 mA	400 mA
Resistance	500 MΩ	500 MΩ	40 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	40 MΩ	40 MΩ	40 MΩ	40 MΩ	60 kΩ	50 MΩ	50 MΩ	50 MΩ	50 MΩ	40 MΩ	40 MΩ	50 MΩ	50 MΩ	50 MΩ
Frequency	1 MHz	1 MHz	50 kHz	200 kHz	200 kHz	100 kHz	100 kHz	100 kHz	50 kHz	50 kHz	50 kHz			200 kHz	200 kHz	100 kHz	200 kHz	20 kHz	20 kHz	100 kHz		100 kHz
Capacitance	100 mF	100 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF	10 mF		10 mF	10 mF	10 mF	10 mF	10 mF			10 mF		10 mF
Temperature	+1350°C	+1350°C	+400°C	+1090°C		+400°C				+400°C					+1090°C		+1090°C			+500°C		
dB	60 dB	60 dB																				
Conductance	50 nS	50 nS		60 nS	60 nS									60 nS	60 nS		60 nS					
Duty cycle/pulse width	●/●	●/●		●/-	●/-									●/●	●/●		●/●					
Continuity with beeper/Diode test	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
4-20mA loop current as % readout																		●	●			
Motor drive measurement	●			●											●					●		
RPM/Dwell																	●/-					
VoltAlertTM, Non-contact voltage detection									●													
LoZ: low input impedance	●								●	●		●										
VCHEKTM LoZ													●									
Microamps	●	●		●	●					●												
Insulation test																				●	●	
Number of insulation test ranges																				5	2	
Display																						
Dual display	●	●																●	●			●
Analog bargraph	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Backlight	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Remote display			●																			
Data storage and exchange																						
Min-Max recording/ with time stamp	●/●	●/●	●	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-		●/-
Fast Min-Max	250 µs	250 µs		250 µs											250 µs		250 µs					
Display Hold/Auto (Touch) Hold	●/●	●/●	●	●/●	●/●	●/●	●/●	●/●	●/-	●/-	●/-	●/-	●/-	●/●	●/●	-/●	●/●	-/●	-/●	●/●		●/-
Relative	●	●		●	●									●	●		●	●	●			
Stand alone logging/TrendCapture	●/●	●/●																				
USB interface/RS232 interface	●/●	●/●																●/●				
Readings memories	10000	10000																				
Other features																						
Source 4-20mA loop current/24V loop supply																		●/●	●/-			
Automatic selection, AC/DC volts									●	●		●										
Real time clock	●	●																				
Smoothing						●	●	●												●		
Integrated holster	●	●	●			●	●	●								●		●				●
Removable holster				●	●				●	●	●	●	●	●	●		●		●	●	●	
Closed case calibration	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
Seperate battry/fuse access	●/●	●/●	●/●	●/-	●/-	●/●	●/●	●/●	●/-	●/-	●/-	●/-	●/-	●/●	●/●		●/-	●/●	●/-	●/●	●/●	●/●
Completely sealed/watertight														●	●							
Automatic power off	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Low battery indication	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Warranty and safety																						
Lifetime warranty/warranty (years)	●	●	3	●	●	●	●	●	3	3	3	3	3	●	●	●	●	3	3	3	3	3
Input alert	●	●		●	●									●	●		●					●
Dangerous voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
EN61010-1 CAT III	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	600 V	600 V	600 V	600 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
EN61010-1 CAT IV	600 V	600 V	600 V	600 V	600 V	600 V	600 V	600 V						600 V	600 V	600 V	600 V			600 V	600 V	600 V
See catalog page	19	19	20	21	21	16	16	16	17	17	17	17	17	18	18	19	20	111	111	37	37	13

280 Series Digital Multimeters

Fluke 289

Fluke 287

Precise performance

View logged data graphically on screen

Advanced diagnostic and logging functionality for maximizing productivity

Replacing the popular 180 Series, the Fluke 289 and Fluke 287 represent the next generation of high-performance industrial logging multimeters, including higher accuracy and greater troubleshooting convenience than ever before. With the ability to log data and review it graphically on the large display, you can solve problems faster and help minimize downtime, while working at several locations.

- Large 50,000 count 320 x 240 (1/4 VGA) dot matrix display
- Logging function with TrendCapture for easy review of logged data
- Multiple readings per display provide more information at a glance
- "I"-info button for convenient on-board help
- PC interface for easy data transfer

In addition, the Fluke 289 provides:

- Lo Pass filter for motor drive measurements
- LoZ – Low impedance function prevents false "ghost voltage" readings
- 50 Ω range for motor winding and low ohm measurements

Features

	287	289
True-RMS measurements	AC, AC+DC	AC, AC+DC
Bandwidth (voltage/current)	100 kHz / 100 kHz	100 kHz / 100 kHz
Digital display counts (default/selectable)	50.000 / 50.000	50.000 / 50.000
Logging function with TrendCapture	●	●
Records events and trends	●	●
Internal memory	Up to 180 h	Up to 180 h
Saves measurements	●	●
Optical USB PC communications interface	●	●
Low input impedance function (LoZ)		●
Motor winding and low ohm measurement range		50 Ω
Low pass filter		●
Field upgradeable/expandable meter	●	●
Navigation keys	●	●
F1-F4 soft keys/user function menus	●	●
I-info button/on board help screens	●	●
Multilingual interface	●	●
Saves preferred measurement setups	●	●
Current measurement: 20 A (30 seconds momentary; 10 A continuous)	●	●
Peak capture (records transients as fast as 250 µs)	●	●
Continuity measurement	●	●
Min/Max/Average with Time Stamp (records signal fluctuations)	●	●
IP Rating 54	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	287 and 289**
Voltage DC	1000 V	1 µV	±(0.025% + 5)
Voltage AC	1000 V	1 µV	±(0.4% + 40)
Current DC	10 A	0.01 µA	±(0.15% +2)
Current AC	10 A	0.01 µA	±(0.7% + 5)
Temperature	-200 °C to 1350 °C	0.1 °C	±(1.0% + 1 °C)
Resistance	500 MΩ	0.01 Ω	±(0.05% + 2)
Conductance	50 nS	0.01 nS	±(1.0% + 10)
Capacitance	100 mF	0.001 nF	±(1.0% + 5)
Frequency	1 MHz	0.01 Hz	±(0.005% + 1)

Accuracies are best accuracies for each function.
** 287 and 289 accuracy and resolution are stated for 50.000 counts

Battery life: 50 hours minimum, 180 hours in logging mode
Size (HxWxD): 222 mm x 102 mm x 60 mm
Weight: 0,871 kg
Lifetime warranty

Included Accessories

TL175 test leads, AC175 alligator clips, probe holder, 6 AA batteries (installed), user manual, Calibration Certificate Sheet.

Ordering Information

Fluke 287	True-RMS Electronic logging multimeter with TrendCapture
Fluke 289	True-RMS Industrial logging multimeter with TrendCapture
Fluke 289/FVF	Industrial logging multimeter and Software Combo Kit (see page 6)
Fluke 287/FVF	FlukeView Forms Combo Kit (see page 6)
FVF-SC2	FlukeView Forms software including IR/USB cable

Recommended Accessories

TLK289
See page 131

TL910
See page 129

TLK287
See page 129

TPAK
See page 140

C280
See page 138

233 Remote Display Multimeter

FLUKE®

Fluke 233

CAT III 1000V
CAT IV 600V
On all inputs

LISTED UL · CSA · TÜV PRODUCT SERVICE · GS · VDE · True RMS

Ultimate flexibility with removable display

The Fluke 233 remote display digital multimeter allows you to be in two places at once. The removable display solves the problems of holding both the meter and the test leads to make a measurement, making measurements in hard-to-reach places, and making measurements in machines or panels that are physically separated from a limit switch or an isolator switch. Wireless technology allows the display to be carried up to 10 meters away from the point of measurement. The Fluke 233 is also designed to work in areas where the operator can't be close to the active measurement point, like clean rooms or hazardous areas.

Features

	233
Removable magnetic display	●
True-RMS measurement	●
Digital display counts	6000
Display backlight	●
Built in thermometer	●
Resistance, continuity and diode test	●
Min/Max and average recording	●
Auto power off maximizes battery life	●
Radio transmitter automatically turns off when the display is connected to the meter	●
Use as conventional multimeter when the display is connected	●
Safety rating	CAT IV 600 V / CAT III 1000 V
Auto and manual ranging	●
Display Hold and AutoHOLD®	●
Unsafe voltage alert warns for voltages above 30V	●
2 Low batteries indication	●
Ergonomic case with integrated holster	●
Selectable sleep mode preserves battery life	●

Specifications

Functions	Fluke 233		
	Maximum	Max. Resolution	Accuracy
Voltage DC	1000 V	0.1 mV	±(0.25% + 2)
Voltage AC	1000 V	0.1 mV	±(1.0% + 3)
Current DC	10 A	1 mA	±(1.0% + 3)
Current AC	10 A	1 mA	±(1.5% + 3)
Resistance	40 MΩ	0.1 Ω	±(0,9% + 1)
Capacitance	9999 µF	1 nF	±(1,9% + 2)
Frequency	50.00 kHz	0.01 Hz	±(0,1% + 2)
Temperature	-40 °C to +400 °C	0,1 °C	±(1% + 10)
Wireless frequency: 2.4 GHz ISM Band 10 meter range			

Accuracies are best accuracies for each function

Battery Life: AA alkaline (3 for main body, 2 for display), 400 hrs typical
Size (HxWxD): 193 x 93 x 53 mm
Weight: 0.6 kg
Three year warranty

Included Accessories

Test leads with 4mm lantern tips, AC 175 alligator clips, 80BK-A temperature probe, CD-ROM, AA batteries and user manual.

Ordering Information

Fluke 233 Remote Display Multimeter

Recommended Accessories

80AK-A
See page 136

80PK-9
See page 136

i410
See page 135

Tpak
See page 140

C35
See page 138

80 Series V Digital Multimeters

FLUKE®

Fluke 87V

Fluke 83V

Lifetime Warranty!

83V/87V

CAT III 1000V
CAT IV 600V

On all inputs

Performance and accuracy for maximum industrial productivity

The Fluke 80 Series V have improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives, in plant automation, power distribution, and electro-mechanical equipment.

The Fluke 87V has a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment. A built-in thermometer conveniently allows you to take temperature readings without having to carry a separate instrument.

Features

	83V	87V
True-RMS voltage and current for accurate measurements on non linear signals		●
Bandwidth (voltage/current)	5 kHz	20 kHz
Digital display counts (default/selectable)	6000	20000 / 6000
Selectable filter for accurate voltage and frequency measurements on motor drives		●
Large display with analog bargraph and 2 level bright white backlight	●	●
Auto and manual ranging for maximum flexibility	●	●
Built-in thermometer lets you carry one less tool		●
Peak capture to record transients as fast as 250 µs		●
Relative mode to remove test lead resistance from low ohms measurements	●	●
Min-Max-Average recording with Min/Max Alert to capture variations automatically	●	●
AutoHOLD® to capture stable readings avoiding noisy signals	●	●
Audible continuity, diode test and duty cycle	●	●
Input Alert	●	●
"Classic" design with new removable holster with built in test lead and probe storage	●	●
Improved selectable sleep mode for long battery life	●	●
Easy battery exchange without opening the complete case	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum Range	83V		87V*	
		Max. resolution	Accuracy	Max. resolution	Accuracy
Voltage DC	1000 V	0.1 mV	±(0.1%+1)	10 µV	±(0.05%+1)
Voltage AC	1000 V	0.1 mV	±(0.5%+2)	10 µV	±(0.7%+2)
Current DC	10 A **	0.1 µA	±(0.4%+2)	0.01 µA	±(0.2%+2)
Current AC	10 A **	0.1 µA	±(1.2%+2)	0.01 µA	±(1.0%+2)
Resistance	50 MΩ	0.1 Ω	±(0.4%+1)	0.01 Ω	±(0.2%+1)
Conductance	60 nS	0.01 nS	±(1.0%+10)	0.001 nS	±(1.0%+10)
Capacitance	9999 µF	0.01 nF	±(1.0%+2)	0.01 nF	±(1.0%+2)
Frequency	> 200 kHz	0.01 Hz	±(0.005%+1)	0.01 Hz	±(0.005%+1)
Temperature	-200 to 1090 °C		-	0.1 °C	1.0%
80BK temperature probe	-40 to 260 °C		-	-	2.2 °C or 2%

Accuracies are best accuracies for each function.
* 87V accuracy is stated for 6000 counts and resolution for 20000 counts
** 20 A up to 30 seconds

Battery Life: Over 400 hours typical (alkaline).
Size (HxWxD):
200 mm x 95 mm x 48 mm

Weight: 0.6 kg
83V/87V: Lifetime Warranty

True RMS

Included Accessories

TL175 test leads, AC175 alligator clips, yellow holster (H80M excl. TPAK), 80BK temperature probe (87V only), 9 V battery (installed), CD-ROM (user's manual and technical notes) and operator's guide.

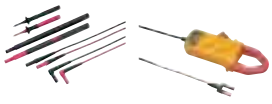
Ordering Information

Fluke 83V	Multimeter
Fluke 87V	True RMS Multimeter
Fluke 87V/E2	Industrial Electrician Combo Kit

See page 5

Recommended Accessories

C25
See page 138



TL238
See page 130

i410/i1010
See page 135

TPAK
See page 140

L215
See page 131

170 Series Digital Multimeters

FLUKE®

Fluke 179

Fluke 177

Fluke 175

Lifetime Warranty!

CAT III 1000V
CAT IV 600V
On all inputs

LISTED UL · CSA · TÜV PRODUCT SERVICE · GS · VDE · True RMS

Versatile meters for field service or bench repair

These meters have the features needed to find most electrical, electro-mechanical and heating and ventilation problems. They are simple to use and have significant improvements over Fluke's original 70 Series like True-RMS, more measurement functions, conformance to the latest safety standards, and a much larger display that's easier to view.

Features

	175	177	179
True-RMS measurements	AC	AC	AC
Digital display counts, updates 4 times per second	6000	6000	6000
Display backlight		●	●
Analog bargraph / 33 segments, updates 40 times per second	●	●	●
Auto and Manual ranging	●	●	●
Display Hold and AutoHOLD®	●	●	●
Min-Max-Average recording mode with Min/Max Alert	●	●	●
Temperature readings (bead thermocouple probe included)			●
Smoothing mode allows filtering of rapidly changing inputs	●	●	●
Audible continuity and diode test	●	●	●
Test lead alert	●	●	●
Unsafe voltage alert warns for voltages above 30V	●	●	●
Low battery indication	●	●	●
Ergonomic case with integrated holster	●	●	●
Easy battery and fuse exchange without opening the complete case	●	●	●
Selectable sleep mode preserves battery life	●	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	175	177	179
Voltage DC	1000 V	0.1 mV	±(0.15%+2)	±(0.09%+2)	±(0.09%+2)
Voltage AC	1000 V	0.1 mV	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current DC	10 A	0.01 mA	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current AC	10 A	0.01 mA	±(1.5%+3)	±(1.5%+3)	±(1.5%+3)
Resistance	50 MΩ	0.1 Ω	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)
Capacitance	10000 µF	1 nF	±(1.2%+2)	±(1.2%+2)	±(1.2%+2)
Frequency	100 kHz	0.01 Hz	±(0.1%+1)	±(0.1%+1)	±(0.1%+1)
Temperature	-40 °C/+400 °C	0.1 °C			±(1.0%+10)

Accuracies are best accuracies for each function

Battery Life: Alkaline, 200 hrs typical
Size (HxWxD): 190 mm x 85 mm x 45 mm
Weight: 0.42 kg
Lifetime Warranty

Included Accessories

Test leads with 4 mm lantern tips, installed 9V battery and users manual. The 179 also includes the 80BK temperature probe.

Ordering Information

Fluke 175	True RMS Multimeter
Fluke 177	True RMS Multimeter
Fluke 179	True RMS Multimeter
Fluke 179/EDA2 Kit	Electronics Combo Kit
Fluke 179/MAG2 Kit	Industrial Combo Kit

See page 5

Recommended Accessories

i400
See page 134

C90
See page 138

TLK-220
See page 130

SV225
See page 141

i410-i1010
See page 135

110 Series Digital Multimeters

Fluke 117

Fluke 115

Fluke 114

Fluke 116

Fluke 113

600V CAT III

On all inputs

LISTED UL · CSA · TÜV PRODUCT SERVICE GS · VDE · True RMS

Compact design for ergonomic one-handed operation

The Fluke 110 Series has five true-rms DMMs, each for specific users. The compact instruments offer convenient one-handed operation and a backlit display with large, easy-to-read digits.

Fluke 117 Electrician's Multimeter with Non-Contact Voltage

The 117 is for electricians working in commercial and non-commercial premises (like hospitals and schools). It includes extras like non-contact voltage detection for faster and safer operation.

Fluke 116 Multimeter with Temperature and Microamps

The 116 is for heating, ventilation and air conditioning (HVAC) engineers. It includes temperature measurement and microamp current ranges to quickly troubleshoot HVAC problems.

Fluke 115 Field Service Testing Multimeter

An everyday multimeter for technicians, the 115 is for electrical and electronic testing in field service, industrial, and applications where more than the basic functions simplify work.

Fluke 114 Electrical Multimeter

The 114 is for electrical troubleshooting and straightforward 'go/no-go' in residential/ commercial testing. It has all the basic functions plus a special feature to prevent false readings caused by ghost voltage.

Fluke 113 Multimeter

The 113 is for basic electrical tests and repairing most electrical problems. Features include Fluke's VCHEK™, added measurement functions, backlight and conformance to the latest safety standards.

Features

	113	114	115	116	117
True RMS readings	AC	AC	AC	AC	AC
Counts	6000	6000	6000	6000	6000
Backlight	●	●	●	●	●
Analog bargraph	●	●	●	●	●
AutoVolt: Automatic AC/DC voltage selection		●		●	●
VoltAlert™, Non-contact voltage detection					●
Built-in thermometer for HVAC applications				●	
LoZ: low input impedance to prevent ghost voltage		●		●	●
VCHEK™ LoZ low impedance measurement function to simultaneously test for voltage or continuity	●				
Min/Max/Average to record signal fluctuations	●	●	●	●	●
Resistance, continuity	●	●	●	●	●
Frequency, Capacitance, Diode test	-/ ●/ ●		●	●	●
Microamps to test flame sensors				●	
Display hold	●	●	●	●	●
Auto/manual ranging	●	●	●	●	●
Low battery indication	●	●	●	●	●
Compact case with removable holster	●	●	●	●	●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Maximum	Max. resolution	113	114	115	116	117
Voltage DC	600V	1mV	±(0.5%+2)	±(0.5%+2)	±(0.5%+2)	±(0.5%+2)	±(0.5%+2)
Voltage AC	600V	1mV		±(1.0%+3)	±(1.0%+3)	±(1.0%+3)	±(1.0%+3)
Current DC	10.00A	1mA			±(1.0%+3)		±(1.0%+3)
Current AC	10.00A	0.01A			±(1.5%+3)		±(1.5%+3)
Resistance	40MΩ (113: 60KΩ)	0.1Ω	±(0.9%+2)	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)	±(0.9%+1)
Capacitance	10000µF	1nF	±(1.9%+2)		±(1.9%+2)	±(1.9%+2)	±(1.9%+2)
Frequency	50kHz	0.01Hz			±(0.1%+2)	±(0.1%+2)	±(0.1%+2)
Temperature	-40°C/+400°C	0.1°C				±(1.0%+10)	
VCHEK™	600.0V AC/DC	0.1V	±(2.0%+3)				

Accuracies are best accuracies for each function

Battery type: 9 volt Alkaline, 400 hours typical
Size (HxWxD): 167 mm x 84mm x 46 mm
Weight: 0.55 kg (including batteries)
Three Year Warranty

Included Accessories

Test leads with 4 mm lantern tips, holster, installed 9V battery and users manual

Ordering Information

Fluke 113	True RMS Multimeter
Fluke 114	True RMS Multimeter
Fluke 115	True RMS Multimeter
Fluke 116	True RMS Multimeter
Fluke 117	True RMS Multimeter
Fluke 117/323 Kit	Electricians Combo Kit
Fluke 116/62 MAX+ Kit	Combo Kit
Fluke 116/323 Kit	Combo Kit

(see page 5)

Recommended Accessories

C50
See page 138

TL223-1
See page 130

MC6
See page 141

TPAK
See page 140

27II / 28II Rugged IP67 Industrial Multimeters

FLUKE®

Lifetime Warranty!

Fluke 27 II

Lifetime Warranty!

Fluke 28 II

True RMS

New

Fluke 28II Ex

CAT III 1000V CAT IV 600V

On all inputs

LISTED

Designed to survive water, dust and rough handling and yet troubleshoot most electrical problems

The Fluke 27 II and 28 II digital multimeters define a new standard for operating in harsh conditions with the features and accuracy to troubleshoot most electrical problems. Both meters have IP 67 (waterproof and dustproof) rating, MSHA approvals, extended operating temperature range of -15° C to + 55°C and 95% humidity, and a 3-meter drop. They withstand hazardous 8.000 volt spikes caused by load switching and faults on industrial circuits and complies with second edition IEC and ANSI electrical safety standards.
Furthermore, the 28 II has a unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment.
The new Fluke 20 series multimeters are built to work in the toughest environments.
For 28II Ex see also page 121 and 122.

Features

	27 II	28 II / 28 II Ex
IP 67 waterproof & dustproof protection	●	●
Withstands 3 meter drop (with holster)	●	●
True-RMS measurements		●
Digital display counts	6000	20000/6000
Bright, two-level backlight	●	●
Backlit keypad buttons	●	●
Reversible, rubber holster	●	●
Built-in thermometer		●
Resistance, continuity and diode test	●	●
Min/Max and average recording	●	●
Improved sleep mode for long battery life	●	●
Relative mode to remove test lead resistance from low ohms measurements	●	●
Auto and manual ranging	●	●
Safety rating	CAT III 1000 V CAT IV 600 V	CAT III 1000 V CAT IV 600 V
ATEX Ex safety rating II 2 G Ex ia IIC T4 Gb II 2 D Ex ia IIIC T130 °C Db I M1 Ex ia I Ma		28 II Ex

Specifications

Functions	Maximum	Max. Resolution	27 II	28 II / 28 II Ex
Voltage DC	1000 V	0.1 mV	±(0.1% + 1)	±(0.05% + 1)
Voltage AC	1000 V	0.1 mV	±(0.5% + 3)	±(0.7% + 4)
Current DC	10 A	0.1 µA	±(0.2% + 4)	±(0.2% + 4)
Current AC	10A	0.1 µA	±(1.5% + 2)	±(1.0% + 2)
Temperature	-200°C to +1090°C	0.1°C		±(1% + 10)
Resistance	50MΩ	0.1Ω	±(0.2% + 1)	
Low pass filter (Measurement on VSD's)				yes
Capacitance	9999µF	0.01nF	±(1% + 2)	
Frequency	200 kHz	0.01 Hz	0.005% + 1	
Peak transient capture				250 µS

Accuracies are best accuracies for each function

Battery Life: 3x AA alkaline, 800 hrs typical
Size (HxWxD): 198 x 100 x 63.5 mm
Weight: 0.75 kg
Lifetime Warranty

Recommended Accessories

PV 350
See page 133

i200
See page 134

i410
See page 135

80K-6
See page 141

Included Accessories

TL175 Test leads, AC175 alligator clips, 80BK-A temperature probe (28 II), holster, manual, CD-ROM, three AA batteries (installed)

Ordering Information

Fluke 27 II	IP 67 Industrial Multimeter
Fluke 28 II	IP 67 True-RMS Industrial Multimeter
Fluke 28 II Ex	Intrinsically safe True-RMS Industrial Multimeter

77IV Digital Multimeter

Versatile multimeter for field service or bench repair

The 77-IV digital multimeter has the features needed to repair most electrical and electronic problems. This meter is simple to use and has significant improvements over Fluke's original 70 Series with more measurement functions, conformance to the latest safety standards, and a much larger display that's easier to view.

Fluke 77 IV

Features

	77 IV
Digital display counts	6000
Large display with backlight	●
Min-Max-Average recording mode with Min/Max Alert	●
High contrast digital display with large digits	●
Analog bargraph/segments	31
Auto and Manual ranging	●
Automatic Touch Hold®	●
Audible continuity / diode test	●
Ergonomic case with integrated holster	●
Sleep Mode preserves battery life	●
EN 61010-1 safety rating	CAT IV 600 V / CAT III 1000 V

Lifetime Warranty!

CAT III 1000V
CAT IV 600V

On all inputs

Specifications

Function	Maximum	Max. resolution	Accurancy
Voltage DC	1000 V	1 mV	±(0.3%+1)
Voltage AC	1000 V	1 mV	±(2.0%+2)
Current DC	10 A	0.01 mA	±(1.5%+2)
Current AC	10 A	0.01 mA	±(2.5%+2)
Resistance	50 MΩ	0.1 Ω	±(0.5%+1)
Capacitance	9999 µF	1 nF	±(1.2%+2)
Frequency	99.99 kHz	0.01 Hz	±(0.1%+1)

Accuracies are best accuracies for each function.

Battery Life: 400 hours typical
Size (HxWxD): 185 mm x 90 mm x 43 mm
Weight: 0.42 kg
Lifetime Warranty

Included Accessories

Test leads with 4mm lantern tips, operator's manual, 9V battery (installed)

Ordering Information

Fluke 77IV Multimeter

Recommended Accessories

i400
See page 134

C35
See page 138

Tpak
See page 140

TL225
See page 141

TLK-225
See page 131

88V Automotive Meter

Fluke 88V/A

Lifetime Warranty!

CAT III 1000V
CAT IV 600V

On al inputs

The right meter for auto-electric diagnosis

Perhaps the most important tool you'll use in troubleshooting auto electrical systems is the multimeter. Basic multimeters measure voltage, current and resistance, while automotive multimeters like the Fluke 88V have features that can check frequency, duty cycle, make diode tests, and measure temperature, pressure and vacuum.

Features

	88V/A
Continuity for detecting open and shorts	●
Frequency for "pulsed-DC" and AC tests	●
Duty cycle to verify operation of feedback carburetors	●
Diode test for alternator testing	●
Built-in thermometer; thermocouple probe included	●
Min/Max/Average recording with Min/Max Alert	●
Peak capture to record transients as fast as 250 µs	●
Relative mode to remove test lead resistance from low ohms measurements	●
Millisecond pulse width measurements for fuel injectors	●
AutoHOLD® to capture stable readings	●
Large display with bright, two-level backlight	●
Magnet hanger to attach meter to the vehicle	●
RPM80 Inductive Pickup for both conventional and distributorless (DIS) ignitions	●
Hard Meter Case	●
Safety rating	CAT III 1000 V, CAT IV 600 V

Specifications

	Fluke 88V		
	Range	Resolution	Accuracy
Voltage DC	1000V	0.1mV	0.1%
Voltage AC	1000V (5 kHz)	0.1mV	0.5%
Current DC	10A	0.1µA	0.4%
Current AC	10A	0.1µA	1.2%
Resistance	50MΩ	0.1Ω	0.4%
Capacitance	10mF	0.01nF	1%
Frequency	200kHz	0.01Hz	0.01%
Temperature	1090°C	0.1°C	1%

Battery Life: 88V – Over 400 hours typical (alkaline)
Size (HxWxD): 88V – 186 mm x 86 mm x 32 mm

Weight: 88V – 0.36 kg
Lifetime Warranty

Included Accessories

H80M Holster with TPAK Meter Hanging Solution, TL224 SureGrip Silicone Test Lead Set, TP74 Test Probe Set, AC285 SureGrip Large Jaw Alligator Clip Set, 80BK Integrated Temperature Probe, RPM80 Inductive Pick-up Probe, C800 Hard Case, User's Manual + Quick Reference Guide

Ordering Information

Fluke 88V/A Automotive Meter Combo Kit

Recommended Accessories

TL82
See page 133

TLK-282-1
See page 133

90i-610s
See page 133

80PK-27 (requires 80AK)
See page 136

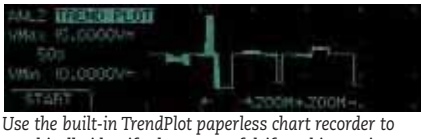
PV350
See page 133

8845A/8846A
6.5 Digit Precision Multimeters

FLUKE®

Fluke 8845A

Fluke 8846A



Use the built-in TrendPlot paperless chart recorder to graphically identify the extent of drift and intermittent events in analog circuits

View results in Histogram mode to reveal stability or noise problems in analog circuits

Handle even the most demanding measurements with high accuracy and 6.5 digit resolution

LISTED UL SA True RMS

Included Accessories

LCI Line Power Cord, Test Lead Set, Spare Line Power fuse, Programmers Manual/ User Manual on CD-ROM, 884X-USB USB to RS232 Cable Adapter, FVF-BASIC FlukeView Forms Software Basic Version.

Ordering Information

Fluke 8845A	6.5 Digit Precision Multimeter
Fluke 8845A/SU	6.5 Digit Precision Multimeter (software + cable)
Fluke 8846A	6.5 Digit Precision Multimeter
Fluke 8846A/SU	6.5 Digit Precision Multimeter (software + cable)

Calibration & Service agreements

Precision and versatility for bench or systems applications

The Fluke 8845A and 8846A, 6.5 digit precision multimeters have the precision and versatility to handle your most demanding measurements on the bench or in a system.

Dual Display offers versatile graphical capabilities: The 8845A and 8846A features a unique graphical display that can reveal signal quality issues like drift, intermittent and stability by viewing the measurement data as a real time TrendPlot™, Histogram or Statistics using the unique analyze mode.
Wide Measurement Ranges: Resistance or current has been extended to cover the widest range possible.

Perform 4-wire measurements easily with two leads: Patented split terminal jacks for 2x4 Ohms function allows you to perform precise 4-wire measurements with only two leads instead of four. Optional Kelvin leads accessories are available to enable you to establish a 4-wire connection even in tight spaces.
Systems Capabilities: Both instruments include an RS-232, IEEE-488 and Ethernet interface as standard, with popular DMM emulation modes makes systems integration a simple task.
Software: Transfer data points from your meter to your PC with the free copy of FlukeView Forms Basic. To customize your forms upgrade with FVF-UG.

Features

	8845A	8846A
Display	Dual VFD Dot Matrix	
Resolution	6.5 Digits	
Measurement Rate (Rdgs/s)	1000	
Continuity / Diode Test	Yes	
Analytical Functions	Statistics, Histogram, TrendPlot™, Limit Compare	
Math Functions	NULL, Min/Max, dB/dBm	
USB Device Port	–	USB Memory Drive port
Real Time Clock	–	Yes
Interfaces	RS232, IEEE-488.2, Ethernet	
Programming Languages/ Emulation Modes	SCPI (IEEE-488.2), Agilent 34401A, Fluke 45	
Safety	Designed to comply with IEC 61010-12000-1, ANSI / ISA-S82.01-1994, CAN / CSA-C22.2 No.1010.1-92 1000V CATI / 600V CATII	

Specifications

(Check the Fluke web for detailed specifications)

Function*	8845A Range	8845A Resolution	8845A Accuracy* (%)	8846A Range	8846A Resolution	8846A Accuracy* (%)
Voltage DC	1000 V	100 nV	0.0035	1000 V	100 nV	0.0024
Voltage AC (Freq 300 Hz)	750 V	100 nV	0.06	1000 V	100 nV	0.06
Resistance (2x4 Wire)	100 MΩ	100 µΩ	0.01	1 GΩ	10 µΩ	0.01
Current DC	10 A	100 pA	0.05	10 A	100 pA	0.05
Current AC (Freq. 3Hz-10kHz)	10 A	10 µA	0.10	10 A	100 pA	0.10
Freq/Period	300 kHz	1 µHz	0.01	1 MHz	1 µHz	0.01
Capacitance	-	-	-	1 nF to 100 mF	1 pF	1
Temperature RTD	-	-	-	-200 to +600°	0.001°	0.06

* Accuracy =+/- (% of reading)

Size (HxWxD): 88 mm x 215 mm x 293 mm
Weight: 3.6 kg
Three Year Warranty

Recommended Accessories

884X-case
Hard case

TL2X4W-TWZ
2x4 Wire Ohms Tweezer Test Leads

TL2X4W-PT II
2x4 Wire Ohms Test lead 2mm Probe Tip

884X-512M
USB Memory 512M

FVF-UG
FlukeView Forms Software Upgrade

8808A 5.5 Digit Multimeter

Fluke 8808A

The Fluke 8808A includes two low impedance low current ranges for measuring sensitive leakage currents

Use setup keys (S1-S6) for fast access to repetitive measurements. Setups can include limit compare mode with pass/fail indicators

Dual Display

LISTED UL CSA True RMS

Included Accessories

LCI Line Power Cord, Test Lead Set, Spare Line Power fuse, 884X-USB USB to RS232 Cable Adapter, FlukeView Forms Software Basic Version, Programmers Manual/User Manual on CD-ROM.

Ordering Information

Fluke 8808A	5.5 digit multimeter
Fluke 8808A/SU	5.5 digit multimeter, (software & cable)
Fluke 8808A/TL	5.5 digit multimeter, 2X4W Test Lead Kit

Versatile multimeter for manufacturing, development and service applications

Manufacturing test, R&D, development and service applications demand performance and flexibility from a bench meter. The Fluke 8808A delivers a wide variety of measurement functions, including volts, ohms, and amps, plus frequency - all at superior accuracy and resolution with a basic V DC accuracy of 0.015 %.

Measure sensitive leakage current: The Fluke 8808A includes two low impedance low current ranges for measuring sensitive leakage currents (i-Leakage).

Perform routine manufacturing functional tests with consistency: Use setup keys (S1 – S6) for fast access to repetitive measurements. Operators no longer need to press multiple buttons to make routine measurements.

Eliminate production mistakes: The 8808A has a limit compare mode with built in display enunciators that clearly show whether a test is within or out of limits.

Perform 4-wire measurements with only two leads: Patented split terminal jacks for 2x4 Ohms function allow you to perform precise 4-wire low ohms measurements with only two leads instead of four. Optional test lead accessories are available to enable you to establish a 4-wire connection even in tight spaces or on surface mount devices.

Features

	8808A
Display	VFD multi segment
Resolution	5.5 digits
Measurements	V ac, V dc, I dc, I ac, Ω, Cont, Diode
Advanced Measurements	2X4 Wire Ohms, Freq, i-Leakage
Continuity / Diode Test	Yes
Analytical Functions	Limit Compare
Math Functions	dBm, dB, Min, Max
Interfaces	RS-232, USB via optional adapter
Programming Languages/Modes	Simplified ASCI, Fluke 45
Safety Rating	CAT I 1000 V, CAT II 600 V

Specifications

(Check the Fluke web for detailed specifications)

Functions	Range	Resolution	Accuracy*
Voltage DC	200 mV to 1000 V	1 µV	0.015
Voltage AC (Freq. 10 Hz to 100 kHz)	200 mV to 750 V	1 µV	0.2
Resistance (2x4 Wire)	200 Ω to 100 MΩ	1 mΩ	0.02
Current DC	200 µA to 10 A	1 nA	0.02
Current AC (Freq. 20 Hz to 2 kHz)	20 mA to 10A	0.1 µA	0.3
Freq. Period	20 Hz to 1 MHz (Freq. only)	0.1 mHz	0.01

* Accuracy = +/- (% of reading)

Size (HxWxD): 88 mm x 217 mm x 297 mm
Weight: 2.1 kg
Three year Warranty

Recommended Accessories

TL2X4W-TWZ
2x4 Wire Ohms Tweezer Test Leads

884X-case
Hard case

TL2X4W-PT II
2x4 Wire Ohms Test lead 2mm Probe Tip

884X-short
4-Wire Short

FVF-UG/SC4/SC5
FlukeView Forms Software

Clamp Meters and Electrical Testers

The ergonomic clamp meters feature wide opening jaws for safe, fast non-contact current measurement. The Fluke leakage clamp meter is ideal for non-invasive checks of insulation resistance.
The range of electrical testers includes two-pole testers for taking quick measurements in tight spaces, phase rotation indicators to take the guess work out of checking phase/motor rotation, a multipurpose cable locator and handy voltage alerts.
The new Fluke iFlex flexible current probes expand the measurement range of select Fluke meters to 2500 A AC and allow technicians to reach crowded spaces.

Clamps Selection Guide

	Residential/commercial electrical			General purpose				Industrial electrical	HVAC/R	High end industrial, utility		iFlex accessory	CNX		Leakage
	323	324	325	365	373	374	375	376/381	902	353	355	i2500-10/ i2500-18	CNX a3000	CNX i3000 iFlex AC	360*
Measurements															
AC current	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
AC volts	●	●	●	●	●	●	●	●	●		●				
Resistance	●	●	●	●	●	●	●	●	●		●				
Continuity	●	●	●	●	●	●	●	●	●		●				
DC Volts	●	●	●	●	●	●	●	●	●		●				
DC current			●	●		●	●	●	●	●	●				
True-rms	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Frequency			●				●	●		●	●	●			
AC + DC voltage											●				
AC + DC current										●	●				
Min/Max/Avg						●	●	●	●	●	●	●	●	●	
Temperature		●	●						●						
Capacitance		●	●		●	●	●	●	●						
Special features															
Inrush current mode						●	●	●		●	●	●	●		
Low Pass filter							●	●		●	●				
Harmonics, power, data logging															
18" iFlex Flexible Current Probe						Optional	Optional	Included							
10" iFlex Flexible Current Probe						Optional	Optional	Optional							
Remote display															
Flashlight/torch				●											
Display															
Display hold	●	●	●	●	●	●	●	●	●	●	●				●
Backlight		●	●	●	●	●	●	●	●	●	●		●	●	●
Specifications															
Jaw opening	30 mm	30 mm	30 mm	18 mm	32 mm	34 mm	34 mm	34 mm	30.5 mm	58 mm	58 mm	7.5 mm coil	34 mm	254 mm	40 mm
Current range ac rms	0 to 400.0 A	0 to 400.0 A	0 to 400.0 A	0 to 200.0 A	0 to 600.0 A	0 to 600.0 A	0 to 600.0 A	0 to 999.9 A	0 to 600.0 A	0 to 1400 A	0 to 1400 A	0 to 2500 A	0.5 to 400A	0.5 to 2500A	0 to 60 A
Accuracy ac current (50/60 Hz)	2,00% ± 5 counts	1,50% ± 5 counts	2,00% ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	1.5 % ± 5 counts	1.5 % ± 5 counts	3 % ± 5 counts	2% ± 5 counts	3% ± 5 counts	1 % ± 5 counts
AC Response	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	True-rms	Averaging
Current range dc			0 to 400A	0 to 200 A		0 to 600.0 A	0 to 600.0 A	0 to 999.9 A	0 to 200 µA	0 to 2000 A	0 to 2000 A				
Accuracy dc current			2 % ± 5 counts	2 % ± 5 counts		2 % ± 5 counts	2 % ± 5 counts	2 % ± 5 counts	1 % ± 5 counts	1,5 % ± 5 counts	1,5 % ± 5 counts				
Voltage range ac	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 1000 V	600.0 V		0 to 600.0 V				
Accuracy ac voltage	1,5% ± 5 counts	1,5% ± 5 counts	1,5% ± 5 counts	2 % ± 5 counts	1 % ± 5 counts	1,5 % ± 5 counts	1,5 % ± 5 counts	1,5 % ± 5 counts	1 % ± 5 counts		1 % ± 5 counts				
Voltage range dc	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 600.0 V	0 to 1000 V	0 to 600.0 V		0 to 1000 V				
Accuracy dc voltage	1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts	2 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts	1 % ± 5 counts		1 % ± 5 counts				
Resistance range	0 to 4000 Ω	0 to 4000 Ω	0 to 4000 Ω	0 to 6000 Ω	0 to 6000 Ω	0 to 6000 Ω	0 to 6000 Ω	0 to 60 kΩ	0 to 9999 Ω		0 to 400 kΩ				
Frequency measurement range			500 Hz				500 Hz	500 Hz		5 to 1000 Hz	5 to 1000 Hz	500 Hz	500 Hz	500 Hz	
Unit power															
Auto off	●	●	●		●	●	●	●	●	●	●		●	●	●
Warranty and safety															
Warranty (years)	2	2	2	3	3	3	3	3	3	3	3	3	3	3	1
Category ratings (EN61010-1)	CAT III 600 V, CAT IV 300 V	CAT III 600 V, CAT IV 300 V	CAT III 600 V, CAT IV 300 V	CAT III 600 V	CAT III 600 V, CAT IV 300 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 600 V	CAT III 1000 V, CAT IV 600 V	CAT III 300 V

320 Series True-rms Clamp Meters

FLUKE®

New

Fluke 325

Fluke 324

Fluke 323

Work with the best

The Fluke 323, 324 and 325 Clamp Meters are designed to perform in the toughest environments and provide noise-free, reliable results users can trust to confidently diagnose problems. True-rms measurements and optimized ergonomics make the 320 Series Clamp Meters the best general troubleshooting tools for commercial and residential electricians.

- Slim, ergonomic design
- Large, easy to read backlight display (324 and 325 only)
- CAT IV 300 V/CAT III 600 V safety rating
- Hold button
- Two-year warranty
- Soft carrying case
- 400 A AC current measurement (AC and DC current; 325 only)
- 600 V AC and DC voltage measurement
- True-rms AC voltage and current for accurate measurements on non-linear signals
- Resistance measurement to up to 40 kΩ with continuity detection
- Temperature and capacitance measurement (324 and 325 only)
- Frequency measurement (325 only)

Specifications

		323	324	325
AC current	Range	400.0 A	40.00 A / 400.0 A	40.00 A / 400.0 A
	Accuracy	2 % ± 5 digits (45 Hz to 65 Hz) 2.5 % ± 5 digits (65 Hz to 400 Hz)	1.5 % ± 5 digits (45 Hz to 400 Hz) Note: Add 2 % for position sensitivity	2 % ± 5 digits (45 Hz to 65 Hz) 2.5 % ± 5 digits (65 Hz to 400 Hz)
DC current	Range	-	-	40.00 A / 400.0 A
	Accuracy	-	-	2 % ± 5 digits
AC voltage	Range	600.0 V	600.0 V	600.0 V
	Accuracy	1.5% ± 5 digits	1.5% ± 5 digits	1.5% ± 5 digits
DC voltage	Range	600.0 V	600.0 V	600.0 V
	Accuracy	1.0 % ± 5 digits	1.0 % ± 5 digits	1.0 % ± 5 digits
Resistance	Range	400.0 Ω/4000 Ω	400.0 Ω/4000 Ω	400.0 Ω/4000 Ω/40.00 kΩ
	Accuracy	1 % ± 5 digits	1 % ± 5 digits	1 % ± 5 digits
Continuity		≤ 70 Ω	≤ 30 Ω	≤ 30 Ω
Capacitance		-	100.0 µF to 1000 µF	100.0 µF to 1000 µF
Frequency		-	-	5.0 Hz to 500.0 Hz
AC response		True-rms	True-rms	True-rms
Backlight		-	Yes	Yes
Data hold		Yes	Yes	Yes
Contact temperature		-	-10.0 °C to 400.0 °C	-10.0 °C to 400.0 °C
Min / Max		-	-	Yes
Max wire diameter		30 mm (600 MCM)	30 mm (600 MCM)	30 mm (600 MCM)
Category rating		CAT III 600 V CAT IV 300 V	CAT III 600 V CAT IV 300 V	CAT III 600 V CAT IV 300 V

Size (HxWxD): 207 mm x 75 mm x 34 mm
Weight: 323: 0,265 kg
324: 0,280 kg
325: 0,283 kg
Two Year Warranty

True RMS

Included Accessories
Test leads, soft case, users manual

Ordering Information
Fluke 323 True-rms Clamp Meter
Fluke 324 True-rms Clamp Meter
Fluke 325 True-rms Clamp Meter

Recommended Accessories

TL223-1
See page 130

TL175
See page 132

381 Remote Display True-rms AC/DC Clamp Meter with iFlex™

CAT III 1000V
CAT IV 600V

True RMS

All the bells and whistles

The Fluke 381 Clamp Meter combines iFlex flexibility with remote reading capability for the ultimate in innovation and safety.

- Remote display reads measurements up to 30 feet away
- iFlex flexible current probe included, 18-inch circumference
- 2500 A AC current measurement with iFlex
- 1000 A AC and DC current measurement with fixed jaw
- 1000 V AC and DC voltage measurement
- Frequency measurement to 500 Hz
- 60 kΩ resistance measurement
- Min/Max/Avg and inrush recording
- CAT IV 600 V, CAT III 1000 V
- Three-year warranty

See specifications chart on page 30.

365 Detachable Jaw True-rms AC/DC Clamp Meter

600V
CAT III

True RMS

Where rugged meets reliable

The Fluke 365 Clamp Meter offers a small, detachable jaw—with four feet of coil—that makes it easy to take and read measurements in tight or hard-to-reach places.

- 200 A AC and DC current measurement
- 600 V AC and DC voltage measurement
- 6000 Ω resistance measurement
- Built-in flashlight
- Large, easy-to-read backlight display
- Three-year warranty

See specifications chart on page 30.

Included Accessories

18-inch iFlex™ Flexible Current Probe (Fluke 381), test leads, soft carrying case, instruction card, safety information sheet, two AA alkaline batteries.

Ordering Information

Fluke 381	Remote Display True-rms AC/DC Clamp Meter with iFlex™
Fluke 365	Detachable Jaw True-rms AC/DC Clamp Meter

Recommended Accessories

TL223-1
See page 130

TL175
See page 132

370 Series Clamp Meters

Fluke 376
(with i2500)

Fluke 375 Fluke 374 Fluke 373

CAT III 1000V
CAT IV 600V

Fluke i2500

LISTED UL · CSA · TÜV PRODUCT SERVICE · GS · True RMS

Be ready for anything

Our new family of true-rms clamp meters provides a range of state of-the-art features to meet even the most demanding job requirements.
All four of the new clamp meters have improved base features such as a large, backlit display, true-rms standard, CAT IV safety rating and a durably constructed body. Additionally, the 376, 375 and 374 are compatible with the iFlex flexible current probe (included with the 376, sold separately for the 375 and 374), and provide increased measurement readings to 1000 A and 1000 V AC and DC.

Features

	373	374	375	376
True-rms	●	●	●	●
AC current	●	●	●	●
AC voltage	●	●	●	●
Resistance	●	●	●	●
Continuity	●	●	●	●
DC volts	●	●	●	●
DC current		●	●	●
Frequency			●	●
Low pass filter			●	●
Inrush current mode		●	●	●
18-inch iFlex Flexible Current Probe		Optional	Optional	Included
10-inch iFlex Flexible Current Probe		Optional	Optional	Optional

Specifications

Functions	Range	373	374	375	376
Current AC	0 to 600.0 A	2% ± 5 counts	2% ± 5 counts	2% ± 5 counts	
	0 to 999.9 A				2% ± 5 counts
Current DC	0 to 600.0 A		2% ± 5 counts	2% ± 5 counts	
	0 to 999.9 A				2% ± 5 counts
Voltage AC	0 to 600.0 V	1% ± 5 counts	1.5% ± 5 counts	1.5% ± 5 counts	1.5% ± 5 counts
Voltage DC	0 to 600.0 V	1% ± 5 counts	1% ± 5 counts	1% ± 5 counts	
	0 to 1000 V				1% ± 5 counts
Resistance range		0 to 6000 Ω	0 to 6000 Ω	0 to 6000 Ω	0 to 60 kΩ
Jaw opening		32 mm	34 mm	34 mm	34 mm
Max. wire size		750 MCM	750 MCM	750 MCM	750 MCM
Frequency measurement range				500 Hz	500 Hz

iFlex™ Flexible Current Probe

The Fluke iFlex flexible current probes expand the measurement range of select Fluke meters to 2500 A AC and allow technicians to reach crowded spaces.

- Expands the measurement range to 2500 A AC while providing increased display flexibility, ability to measure awkward sized conductors and improved wire access
- Compatible to Fluke 374, 375, 376 and 381
- CAT IV 600 V, CAT III 1000 V
- 7.5 mm coil diameter allows measurement in tight spaces
- Ergonomic design allows easy operation with one hand
- 1.8 m cable
- Three-year warranty

Included Accessories

18-inch iFlex™ flexible current Probe (Fluke 376), test leads, soft carrying case, instruction card, safety information sheet, two AA alkaline batteries.

Ordering Information

Fluke 376	True-rms AC/DC Clamp Meter with iFlex™
Fluke 375	True-rms AC/DC Clamp Meter
Fluke 374	True-rms AC/DC Clamp Meter
Fluke 373	True-rms AC Clamp Meter
i2500-10 iFlex™	Flexible Current Probe 25 cm
i2500-18 iFlex™	Flexible Current Probe 45 cm

Recommended Accessories

TL223-1
See page 130

AC285
See page 132

TL175
See page 132

350 Series AC/DC Clamp Meters

Fluke 353

Fluke 355

True-RMS, 2000 A Clamp Meters for industrial and utility applications

Confidently take reliable readings with the true-rms, Fluke 353/355 Clamp Meters; the tools of choice for high current measurement up to 2000 A. The extra-wide jaw easily clamps around large conductors, typically found in high current applications. The rugged design and CAT IV 600 V, CAT III 1000 V ratings add an extra element of protection when taking high-powered measurements.

Accurate peak measurements can be taken using the in-rush current mode - ideal for motors and inductive loads. The 355 also measures voltage and resistance, making this the most versatile tool for utilities, electrical contractors and industrial service technicians.

Features

	353	355
True-RMS measurements	●	●
Display backlight	●	●
Motor start-up current	●	●
Min/Max/Average	●	●
Voltage AC/DC		●
Resistance measurement		●
Continuity measurement with beeper		●

Specifications

(Check the Fluke web for detailed specifications)

Functions	Range	353	355
Current AC/DC	0-40.00 A	1.5% ± 15 counts	1.5% ± 15 counts
	0-400.0 A	1.5% ± 5 counts	1.5% ± 5 counts
	0-2000 A; 1400 AC rms		
Crest Factor		2.4	2.4
Voltage AC/DC	0-4.000 V		1% ± 10 counts
	0-40.00 V		1% ± 5 counts
	0-400.0 V		
	0-600 V AC rms		
	0-1000 V DC		
Resistance	0-400.0 Ω		1.5% ± 5 counts
	0-4.000 kΩ		
	0-40.00 kΩ		
	0-400.0 kΩ		
Continuity beeper	Appr. ≤ 30 Ω		
Frequency	5.0Hz to 100.0Hz		0.2% ± 2 counts
	100.1Hz to 999Hz		0.5% ± 5 counts

600V CAT IV

1000V CAT III

LISTED UL SA True RMS

Power Supply: 6 x 1.5V AA NEDA 15A or IEC LR6
Battery Life: 100 hours (with typical usage, backlight off)

Size (HxWxD): 300 mm x 98 mm x 52 mm
Jaw opening: 58 mm
Weight: 0.814 kg
Three year warranty

Included Accessories

Fluke 353: C43 Soft Meter Case, 6 AA batteries, users manual
Fluke 355: C43 Soft Meter Case, 6 AA batteries, TL224 SureGrip® Silicone Test Lead Set, TP2 Slim Reach Test Probe Set (2 mm), AC285 SureGrip® Alligator Clip Set, users manual

Ordering information

Fluke 353 AC/DC Clamp Meter
Fluke 355 AC/DC Clamp Meter

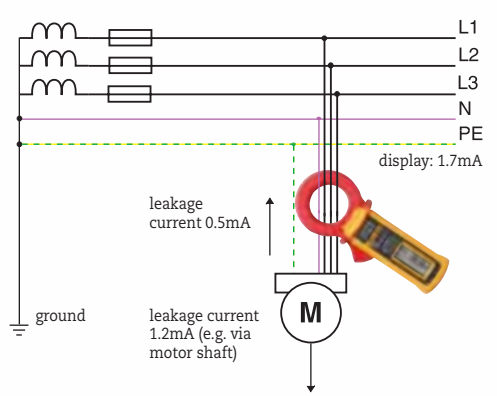
Recommended Accessories

TL223-1 (Fluke 355)
See page 130

L215 (Fluke 355)
See page 131

360 Leakage Clamp Meter

Fluke 360



Leakage current measurements with a tough, pocket sized clamp meter

Features

- Measurement of leakage protectives conductor and touch current with a resolution of 1µA
- Advanced shielding to ensure accurate results when measuring near other conductors
- Automatic ranging within the manually selected mA or A range
- Easily viewed measurements on digital and bargraph display and HOLD when measuring in hard to see locations
- Broad range of measurements currents up to 60 A for all installation needs
- Easy carrying, pocket sized clamp with wide 40 mm jaw size
- Display-Hold for convenience in use
- Auto power off with audible warning buzzer
- Conformance to IEC61010 and EMC standard
- Meets all the applications and performance classes in safety standard VDE0404-4 and the new VDE0702

Specifications

(Check the Fluke web for detailed specifications)

Functions	Range	Resolution	Accuracy
Current AC	3mA 30mA	0.001A 0.01mA	1% ± 5 counts
	30A 60A	0.01A 0.1A	1% ± 5 counts (0~50A) 5% ± 5 counts (50~60A)
Frequency	50 and 60Hz		

902 True-rms HVAC Clamp Meter

Fluke 902

True RMS

Just for our HVAC pros

HVAC (heating, ventilation, air conditioning) technicians require a service tool that can consistently keep up with their demands. The Fluke 902 expands the existing line of quality Fluke clamp meters by delivering the features necessary to diagnose and repair HVAC systems. Combined with true-rms technology and a CAT III 600 V rating, the Fluke 902 helps technicians do their jobs safely and accurately.

- Designed for HVAC applications with capacitance, dc current (µA), and temperature measurements
- Small body and jaws fit perfectly in your hand and into tight places
- Handy "Display Hold" button keeps measurements on the display
- Meter controls are positioned so current measurements can be done with one hand (index finger on clamp opening lever and thumb on rotary switch)
- Three-year warranty

See specifications chart on page 30

Specifications

Functions	Range	321	322	902
Current AC	0 to 400.0 A	1.8% ± 5 counts	1.8% ± 5 counts	
	0 to 600.0 A			2% ± 5 counts
Current DC	0 to 200.0 µA			1% ± 5 counts
Voltage AC	0 to 600.0 V	1.2% ± 5 counts	1.2% ± 5 counts	
	600.0 V			1% ± 5 counts
Voltage DC	0 to 600.0 V		1% ± 5 counts	1% ± 5 counts
Resistance range		0 to 400 Ω	0 to 400 Ω	0 to 9999 Ω
Jaw opening		25.4 mm	25.4 mm	30.5 mm
Max. wire size		500 MCM	500 MCM	750 MCM

Included accessories

Test leads, temperature probe (Fluke 902), soft carrying pouch and users manual

Ordering information

Fluke 360	Leakage Clamp Meter
Fluke 902	True-rms HVAC Clamp Meter

T90/T110/T130/T150
Voltage and Continuity Testers

FLUKE®

New

Fluke T150

Fluke T130

Fluke T110

Fluke T90

Fluke T90

Fluke T110, T130, T150

Rugged, high-quality testers for fast test results the way you need them

All electricians need a two-pole tester. Experienced professionals know that they can—and should–trust their job, their reputation and even their personal safety to Fluke electrical test tools. Our new family of Two-Pole Voltage Testers is no exception. Built with state-of-the art measurement and safety technology, these testers offer everything you expect from Fluke, and a little bit more.

- Rugged, high-quality construction is built to last. This includes a heavy duty molded case, a thicker cord with wear indicator, sturdy battery case, and well fitting and durable probe protector.
- Fast test results the way you need them, with large, easy-to-use buttons, bright backlights, and clear audible and physical indicators designed for any work situation.
- Enhanced ergonomic design feels good in your hand, is easy to use (even with gloves on) and quick, secure probe docking.
- Compliant with regulation HSE GS 38 (tip caps) and IEC EN 61243-3: 2010

Features

	T90	T110	T130	T150
Backlit LED indicator	●	●	●	●
Backlit LCD Digital Display			LCD	LCD
Continuity test – visual results	●	●	●	●
Continuity test – audible results	●	● with on/off	● with on/off	● with on/off
Vibratory indicator under load		● with on/off	● with on/off	● with on/off
Display Hold			●	●
Voltage test	●	●	●	●
Indication of polarity	●	●	●	●
Resistance measurement				●
Switchable Load		●	●	●
Single pole test for phase detection	●	●	●	●
Rotary field indicator		●	●	●
Probe tip protection	●	●	●	●
Voltage display with discharged batteries	●	●	●	●
Electrical torch function		●	●	●
Wear indicator test lead wire	●	●	●	●

Specifications

	T90	T110	T130	T150
Voltage AC/DC	12V - 690V	12V - 690V	6V - 690V	6V - 690V
Continuity	0 - 400 kΩ			
Frequency	0 - 60 Hz	0 - 400 Hz		
Phase rotation	-	100 V - 690 V		
Resistance measurement	-	-	-	Up to 1999 Ω
Response Time (LED ladders)	< 0.1 s			
200 kΩ input impedance	Current draw 3,5 mA @ 690 V Current draw 1,15 mA @ 230 V			
7k Ω input impedance (with load buttons pressed)	-	Current draw 30 mA @ 230 V		
Safety rating	CAT II 690V CAT III 600V	CAT III 690V CAT IV 600V		
IP rating	IP54	IP64	IP64	IP64

Size T90 (HxWxD):
230 mm x 65 mm x 38 mm
Size T110, T130, T150 (HxWxD):
26 mm x 70 mm x 38 mm

Weight T90: 0.18 kg
Weight T110, T130, T150: 0.28 kg
Two year warranty

Included Accessories

Two 2-AA batteries and instruction sheet

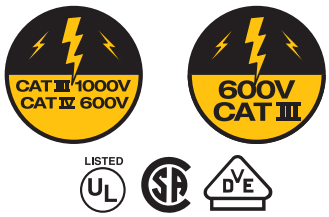
Ordering Information

Fluke T90	Voltage/Continuity Tester
Fluke T110	Voltage/Continuity Tester with switchable load
Fluke T130	Voltage/Continuity Tester with LCD, switchable load
Fluke T150	Voltage/Continuity Tester with LCD, Ohms, switchable load

Recommended Accessories

H15
See page 139

C150
See page 138


CAT III 1000V
CAT IV 600V
600V
CAT III
LISTED